

A Modular Open Systems Approach to

System of Systems Architecture Modeling



COL Ken Flowers Director, Open Systems Joint Task Force

> kenneth.flowers@osd.mil www.acq.osd.mil/osjtf

Purpose / Rules of Engagement / Agenda



- Cultivate the dialogue in the Architecture Modeling COI
 - Discovery
 - Leverage
 - Collaboration
 - Chart "what's next" as COI

> ROE

- Cover the highlights
- Stay in allotted time
- Questions & comments will be captured
 - Determine need for follow-on meeting

Agenda



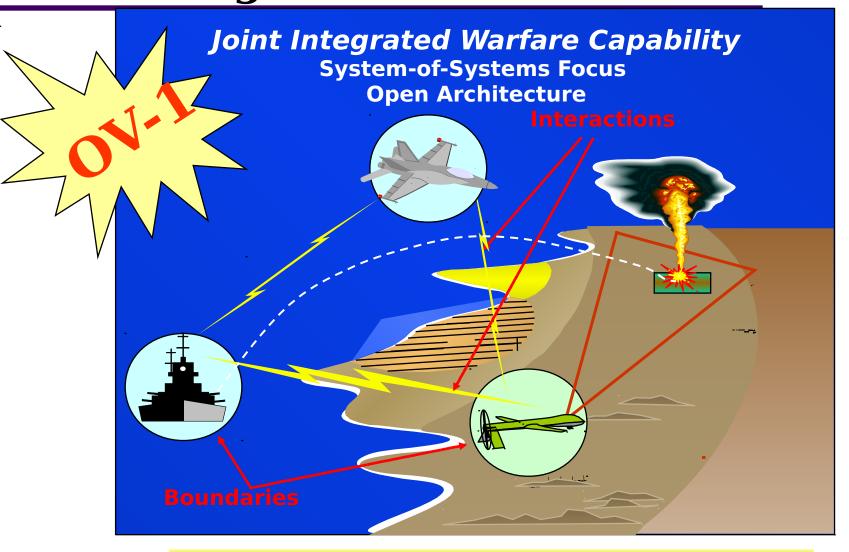
13:00	SoS Architecture Modeling	COL Kenneth Flowers, OSJTF
13:10	AMSWG Finding & Actions	Fred Myers, DS/DTESO
13:25	DCGS-A Data Driven Information Support Plan	Pug Gutridge, Cherokee Information Services
13:40	Information Support Plan	Paul Szabados, NII
13:55	Open Standards for Architecture Modeling Tools	Dwayne Hardy, OSJTF
14:05	SysML Overview & Status	Conrad Bock, SysML Submission Team (NIST)
14:25	UML Profile for DoDAF/MODAF	Fatma Dandashi, Mitre
14:45	AP233 Overview & Status	Jim U'Ren, ISO AP233 Standardization Lead
15:00	CADM-AP233 Mapping	David Price, Eurostep
15:15	Model Based Engineering - Electro Mechanical Integration	Peter Denno, NIST
15:30	Matrix Mapping Tool	Judith Dahmann, DS/PAT (Mitre)
15:45	Review of Parking Lot Items	Lt Col Brett Telford, OSJTF
16:00	Closing Discussion	COL Kenneth Flowers, OSJTF
26 AUG 05 Further dissemination only at the direction of OSJTF 3		

The Milestone Decision Authority may authorize entry into the acquisition process at any point, consistent with phase specific entrance criteria and Concept Refinement Phase → ← Technology Development Phase System Development & Demonstration Phase —

Develop a system or Increment of capability; reduce integration and manufacturing rick; ensure operational supportability; Refine Initial concept. Develop Technology Reduce technology risk and determine appropriate set of reduce logistics footprint; implement human systems integration; design for producibility; ensure affordability and protection o Development Strategy technologies to integrate into a full system. MS MS oritical program information; and demonstrate system integration, interoperability, safety, and utility. В System Integration System Demonstration DRR COD - Capability Development Document CJCSI - Chairman, Joint Chiefs of Staff KPP8 DAB - Defence Acquisition Board ICD - Initial Capabilities Document System Threat Assessment System Threat Assessm IOC - Initial Operational Capability Instruction Not-Ready Vot-Roady CPD - Capability Production Document DOTMLPF - Doctrine, Organization, Training. JROC - Joint Requirements Oversight Council Materiel, Leadership, Personnel, and Facilities | KPP - Key Performance Parameter Draft Threshold/objective tradeoffs -Joint Integrating Concept Integrated Architecture int Integrating Concept CDD Reviced Performance Attributed nformation Support Support Initiate Evolutionary Acquisition Strategy **Evolutionary Acquis** -Compliance (all IT) Compliance (sli IT) Exit MDA ADM APB Criteria ADM DAB/ APB Criteria MDA ADM ITAB Criteria Exit Exit Exit Criteria Technology Development «Research & Tech Protection Research & Tech Prote Program Structure Program Structure Strategy Acquisition Approach -Information Assurance **Acquisition Approach** Information Assurance Oversight & Review Acronyms Capability Needs Product Support Product Support ADM - Acquisition Decision Memorandum FRPOR - Full-Rais Production Decision Review Program Strategy
Cost, schedule & performance T&E Considerations **T&E** Considerations -Human Systems Integration Human Systems Integ AoA - Analysis of Alternatives IOC - Initial Operational Capability TLCSM TLCSM TLCSM APG - Acquisition Program Gaseline ITAB - Information Technology Acquisition Risk Management goals & exit criteria for first tech CD - Concept Decision Resource Management Resource Nanagement ·MOSA -monstration DAB - Defense Acquisition Board LRIP - Low Rate Initial Production Systems Engineering Systems Engineering Test Plan DRR - Design Readiness Review MAIS - Major Automated Information System roperability « Practices Interoperability ESOH - Environment, Safety & MDA - Milestone Decision Authority elief, Exemptions & W. Occupational Health MDSA - Modular Open Systems Approach FCC - Full Operational Capability TLCSM - Total Life Cycle Systems Management AOA AOA AOA Draff Draft Technology System Development Source RFP RFP Aog Source Development Selection & Demonstration Selection Plan RFP RFP Contract Contract REP -Integrated Baceline Integrated Baseline Request for Proposal Review Review Preferred Prototypes/ Prototypes/ Tech System Initial System Engineering Engineering Materiel Performance Production Demos Approach(es) Spec **Dev Models** Bacellin Concept Dev Models

SoS Architecture Modeling Challenge

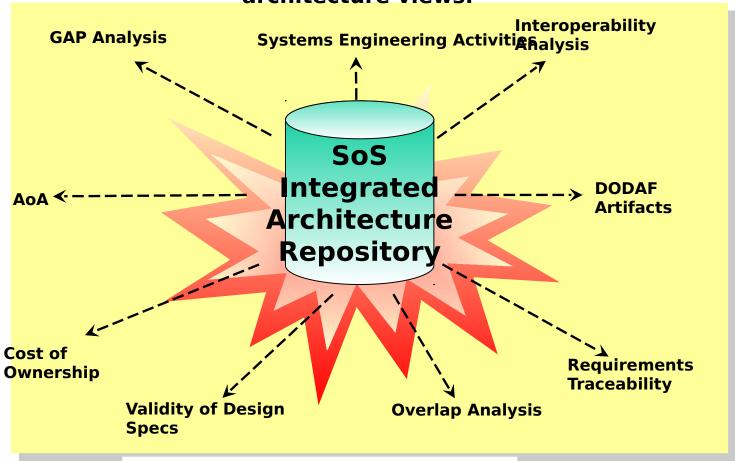




Integrated Architecture Modeling Construct



Core Architecture Data Model (CADM) enables analysis by defining relationships of data elements between architecture views.



Analysis is performed by writing queries against the database.

Related Modeling Efforts



